

KNIGHT BRIDGE

(Columbia County Bridge No. 44)
Township Route 413 Over Catawissa Creek
Mainville Vicinity
Columbia County
Pennsylvania

HAER No. PA-429

HAER
PA
19-MAV. V
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service
Philadelphia Support Office
U.S. Custom House
200 Chestnut Street
Philadelphia, PA 19106

HISTORIC AMERICAN ENGINEERING RECORD
KNIGHT BRIDGE (Columbia County Bridge No. 44)

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Location:

Township Road 413 over Catawissa Creek
Mainville vicinity, Columbia County, Pennsylvania
U.S.G.S. Shumans Quadrangle
Universal Transverse Mercator
Coordinates:
18.385815.4535175

Date of Construction:

1893

Builder:

King Bridge Company

Present Owner:

Pennsylvania Department of Transportation

Present Use:

Vehicular Bridge

Significance:

Knight Bridge (Columbia County Bridge No. 44) was constructed in 1893 to carry traffic over Catawissa Creek. Built by the nationally significant King Iron and Bridge Company of Cleveland, Ohio, the Columbia County Bridge No. 44 is a good, intact example of the Pratt through truss bridge type built in the late nineteenth century.

Project Information Statement:

Knight Bridge (Columbia County Bridge No. 44), a structure eligible for the National Register of Historic Places under Criterion C, is slated for replacement. This documentation was undertaken as a mitigation measure for the bridge replacement.

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August 1996

Knight Bridge (Columbia County Bridge No. 44) was constructed in 1893 to carry Township Road 413 over Catawissa Creek in Main Township, Columbia County (Resource Location Map). Built by the King Iron and Bridge Company of Cleveland, Ohio, the Knight Bridge is a good, intact example of the Pratt through-truss bridge type built in the late nineteenth century.

A. History of Main Township, Columbia County

The project area is located within Main (or Maine) Township in Columbia County, a part of the Wyoming Valley of Pennsylvania. The county features a varied terrain of mountains, hills, and plains. The Catawissa Mountain, which rises to an elevation of 1,500 feet, crosses the county approximately 1.3 miles north of the project area. The Catawissa Creek, a tributary of the North Branch of the Susquehanna River, winds through the project area. One historian described Main Township as "half ... given up to nature, owing to the abruptness of the hills and valleys" (Historical and Biographical Annals 1915:246). The project area lies on a relatively broad floodplain adjacent to the Catawissa Creek and Scotch Run. East of the creek, the land rises to form the Nescopeck Mountain; to the west of the creek is Catawissa Mountain.

A Native American path followed the Catawissa Creek through the project area, meeting the Susquehanna River at the Native American village, Lapachpeton, located at present-day Catawissa Borough (Wallace 1994:31). The village of Lapachpeton, also known as Oskohary, is believed to have been occupied by the Lenape during the second and third quarters of the eighteenth century (Barton 1976:6).

The area of present-day Columbia County was acquired from the Native Americans by the proprietors as part of the "New Purchase" in 1768 (Munger 1991:62). The first warrant granting land in the county was awarded on April 3, 1769. Samuel John of Berks County received the first land warrant in present-day Maine Township in 1772 (Barton 1976:6). Most of the settlers who removed to the area before 1808 migrated from Berks and Lehigh Counties (Battle 1887:292). In 1813, Columbia County was created from Northumberland County. Maine (or Main) Township separated from Catawissa Township in 1844.

The early economy of Main Township was dominated by the iron industry. The first charcoal iron furnace in Columbia County was built in 1815 by John Hauck on the Catawissa Creek (approximately 5,200 feet north of the Knight Bridge). Hauck selected the site due to the abundance of wood for fuel, the supply of ore nearby at Locust Mountain, and the nearby road to the town of Reading. At

first, Hauck produced only pig iron at the furnace, but he soon began to cast stoves and plows on-site. Hauck also constructed a grist mill on the banks of the Catawissa (Historical and Biographical Annals 1915:246). In 1826, Harley and Evans built a forge on the Catawissa approximately 2,640 feet north of Hauck's furnace and grist mill.

According to local historians, a fulling mill once stood within the project area approximately 240 feet north of the bridge. The fulling (or carding) mill was operated by George Fleming some time after 1820 (Battle 1887:249; Historical and Biographical Annals 1915:248). According to one historian, "About the year 1820 a school was opened by Jacob Gensel in George Fleming's carding mill on Scotch run, southeast of Mainville" (Historical and Biographical Annals 1915:248). However, tax assessment records do not designate George Fleming as the owner of any type of mill, although he does appear as the owner of a saw mill on a map of 1876 (Triennial Tax Assessment Records, 1820-1891; Beers 1876). The road intersecting with S.R. 0339 within the project area is known as Full Mill Road, and the hill which rises to the east of the project area is named Full Mill Hill. In addition, a deed of 1870 mentions the fulling mill race, as does a deed of 1936 (Deed Book 24:339; 112:550). Although the tax assessments never credit Fleming or any of the owners of the land in the area with a fulling mill, it does appear likely that a fulling mill did operate during the mid-nineteenth century within the project area on Scotch Run and Catawissa Creek.¹

Two railroads, one on each side of the Catawissa Creek, served the project area during the nineteenth and early twentieth centuries. In 1838, construction of railroad tracks for the Catawissa Railroad (a branch of the Pennsylvania and Reading Railroad), on the west side of the creek, began but remained incomplete until 1853. The line was rebuilt, including a trestle bridge or viaduct over the Catawissa Creek south of Mainville, downstream of the bridge site. The Danville, Hazleton, and Wilkes-Barre Railroad (later the Sunbury, Hazleton, and Wilkes-Barre) started operation on the east side of the Catawissa Creek during the third quarter of the

¹ Additional information also points to a fulling mill on Columbia County Tax Parcel 22,10-2. In 1864, the tract (30 acres) was valued at \$3,000; in 1870, the 30-acre tract had an assessment of \$480. The radical devaluation in assessment suggests that perhaps a mill had been operating on the property and the mill burned or for some other reason ceased operations between 1864 and 1870 (Triennial Tax Assessment Records 1864 and 1870).

nineteenth century (Battle 1887:293). Both railroads continued operating into the twentieth century.

Milling continued along the Catawissa Creek in the second half of the twentieth century. G. Fleming's saw mill, according to a county atlas, operated on the south side of Scotch Run in 1876 (Beers 1876). Frances Fleming, noted as the owner of the house on the north side of Scotch Run, was described in tax assessments for 1876 as a cabinetmaker who owned 30 acres; his shop also appeared on the atlas, north of the project area. G. Fleming never appeared in tax assessments; it is possible that the mill was part of F. Fleming's 30-acre tract.

William Hauck (Hawk) purchased the land on the south side of Scotch Run in 1870 and ca. 1875 (Deed Book 24:339; Tax Assessment Records 1870-1876). Fifteen years after acquiring the acreage, Hauck constructed a new house and mill on the property and was described as a miller on the tax assessments (Triennial Tax Assessment Records 1891). This mill complex, according to a local historian, consisted of "a saw mill, feed mill, and cider press. ... The feed mill has a small capacity and ... operate(s) as occasion demands" (White 1940:np). A deed granting the property in 1931 described the mill slightly differently, stating that the complex included "a saw mill, shingle mill, and chopper combined" with "water power and a 16 horsepower gasoline engine" (Deed Book 108:494). The mill continued to operate at least until 1940 (White 1940:np).

The mill along the Scotch Run closed down operations during the third quarter of the twentieth century. The mill, a one-story frame building, remained standing until 1974 when the Pennsylvania Department of Transportation condemned the land along S.R. 0339 as part of a road improvement project, causing demolition of the mill. The mill race had been previously filled by the property owners (Deed Book 266:198; Wynings 1995).

B. History of Knight Bridge (Columbia County Bridge No. 44)

The Knight Bridge was constructed in 1893 to carry a road leading from the Catawissa Mountain eastward to the road from Mainville to Shumans, over Catawissa Creek. Currently known as Township Road 413, the name ascribed to the road in the 1890s was Fisher Hollow Road for a G(eorge) Washington Fisher, a landowner on Catawissa Mountain.

Columbia County bridge records indicate that the first petition for a bridge across Catawissa Creek in this location occurred in 1890 (Columbia County Road Docket 3:432). Although the appointed viewers recommended a bridge at the site, the grand jury of the

county denied the request. Two years later, another petition for a bridge was filed, viewers appointed, and a viewer's report issued in favor of the construction of the bridge. This time, the county officials agreed (Columbia County Road Docket 3:491).

In January 1893, the Columbia County Commissioners contracted with the King Bridge Company of Cleveland, Ohio, for the construction of the bridge (Columbia County Commissioners Order Book: 259). L. C. Brown was the agent for the bridge company.

The cost of the contract for the bridge was given as \$2,400. The county commissioners granted the King Bridge Company contracts for two additional bridges in the county -- one in Greenwood, the second in Sugarloaf Township.

In June 1893, the commissioners received bids for the construction of the bridge abutments for the three bridges. The lowest bid for the abutments of the Main Township bridge, referred to as the Knight Bridge, was N. A. Tubbs of Benton, Columbia County (Columbia County Commissioners Order Book: 261).²

C. Knight Bridge (Columbia County Bridge No. 44) and Metal Truss Bridge Technology

The Knight Bridge is a Pratt through truss bridge with lattice-braced portals (see Schematic Plan, Schematic Elevation, and Schematic Cross Section). The bridge, a simple single span, has a clear span length of 115 feet, a 12-foot, 10 $\frac{1}{4}$ -inch roadway width, and a vertical clearance of 15 feet. The bridge has a timber deck of two-inch by four-inch boards, timber wheel guards, and simple pipe railing. The superstructure has pin-connected top and bottom chords and riveted, built-up I-shape floorbeams. The end posts, verticals, and struts have diagonal webbing. The stringers are steel I-beams. The substructure consists of a stone abutment on the west side (Abutment No. 1 on Schematic Elevation, Page 7) and a concrete-encased abutment on the east (Abutment No. 2). The portals have bridge plaques which have been covered by vertical clearance posting signs.

The development of metal truss technology in the second half of the nineteenth century led to the establishment of manufacturing companies devoted to the production of metal trusses for bridge and

² The commissioner's order book indicates that the specifications for the substructure work were filed in the "bridge book" on page 282. This book, as well as the original bridge plans, have not been located.

structure construction such as the King Bridge Company of Cleveland, Ohio. The King Bridge Company traces its beginnings back to 1858 under the proprietorship of Zenas King. He began to build iron bridges as well as wood and combination spans. In 1859, he designed and built his first all-iron bridge. His reputation was established on the tubular arch bridge, which he patented in 1861. In 1871, Zinas King incorporated King Iron Bridge and Manufacturing Company. By 1884, the company was able to claim the largest highway bridge works in the United States. Its name was changed to King Bridge Company about 1893. King Bridge Company continued to build bridges until a few years after World War II. A 1915 history of Columbia County attributes several major bridges in the area to the King Bridge Company, including three bridges over the Susquehanna River at Bloomsburg (1893), Mifflin (1902-1904), and Danville (1904).

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Agencies and Institutions Contacted

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Columbia County Courthouse, Bloomsburg, Pennsylvania.

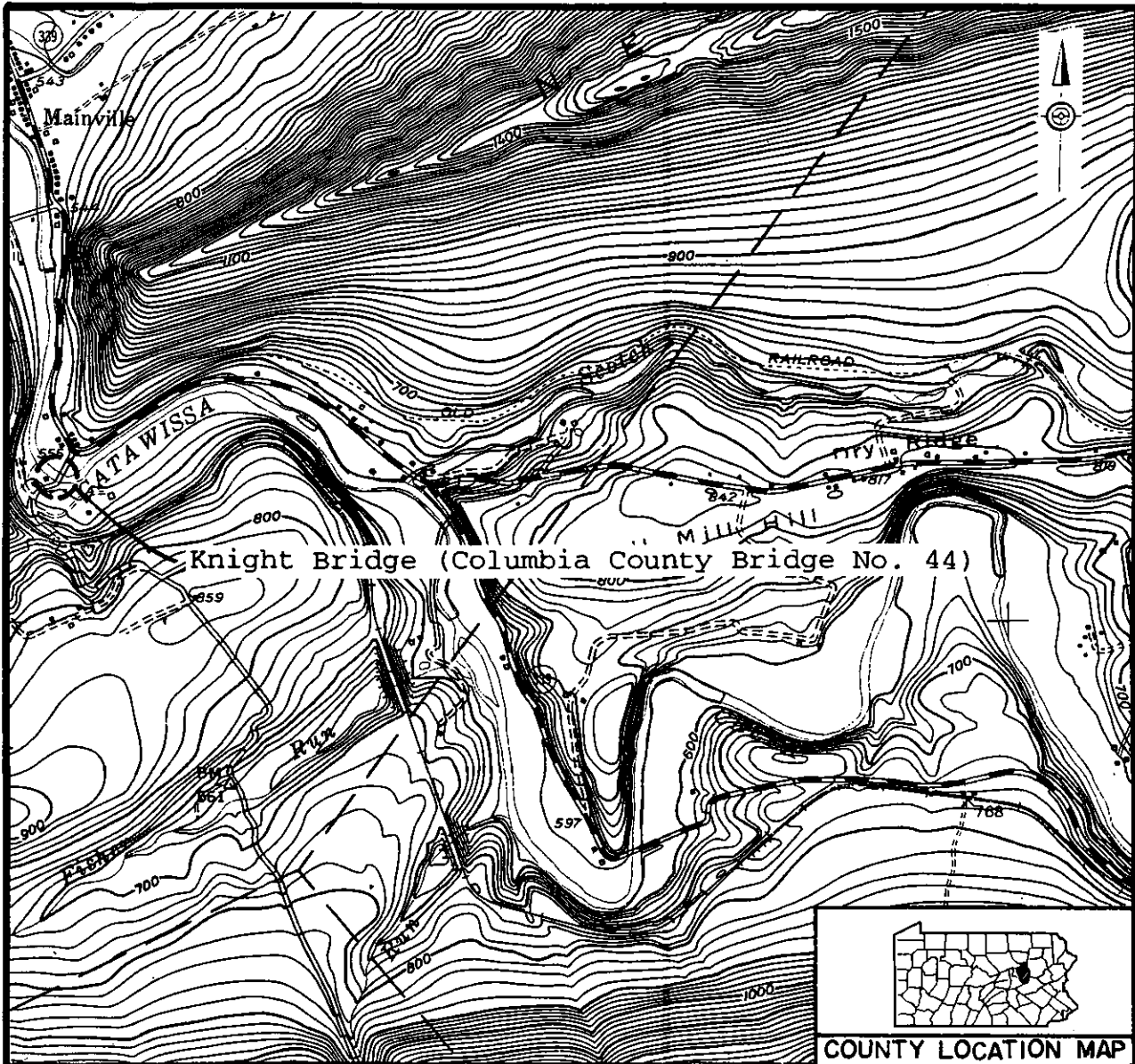
Pattee Library, The Pennsylvania State University, University Park, Pennsylvania.

Pennsylvania Bureau for Historic Preservation, Harrisburg, Pennsylvania.

Pennsylvania State Archives, Harrisburg, Pennsylvania.

Pennsylvania State Library, Harrisburg, Pennsylvania.

KNIGHT BRIDGE (Columbia County Bridge No. 44)
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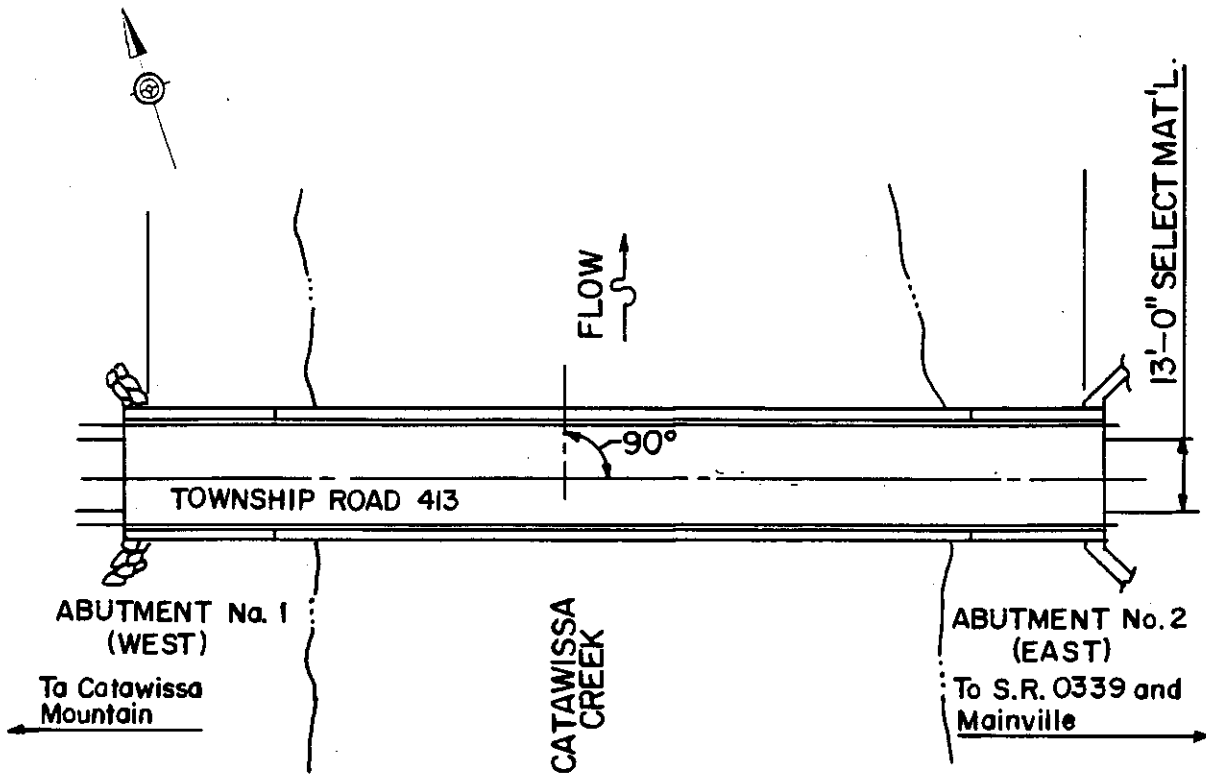


Knight Bridge (Columbia County Bridge No. 44)
Township Route 413 Over Catawissa Creek
Main Township
Columbia County, Pennsylvania

Resource Location Map

Source: U.S.G.S. Shumans, Pennsylvania, Quadrangle

Scale: 1"=2,000'

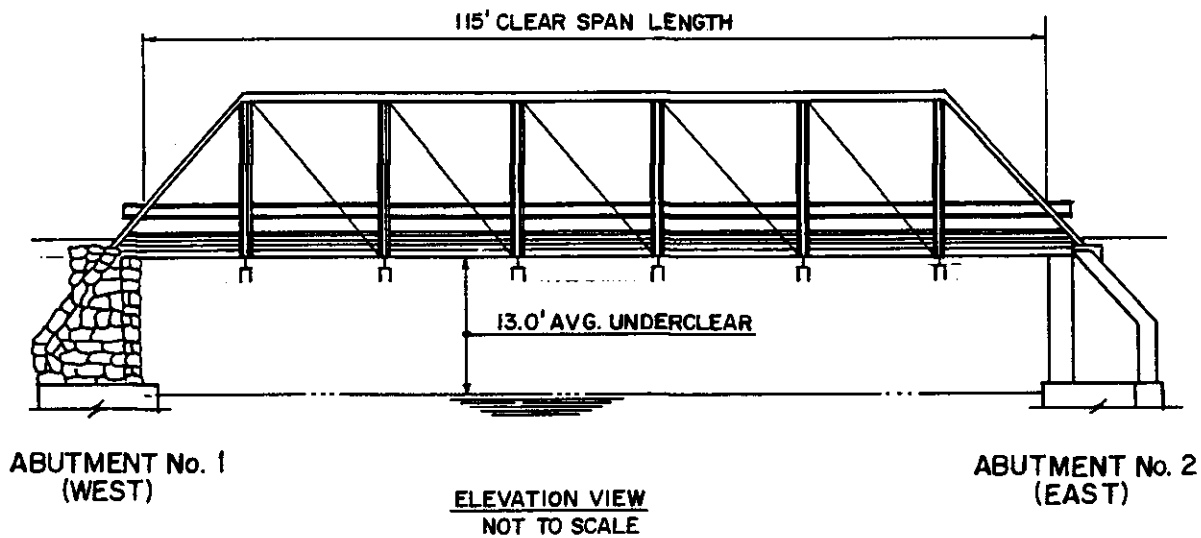


PLAN VIEW
NOT TO SCALE

Knight Bridge (Columbia County Bridge No. 44)
Township Route 413 Over Catawissa Creek
Main Township
Columbia County, Pennsylvania

Schematic Plan

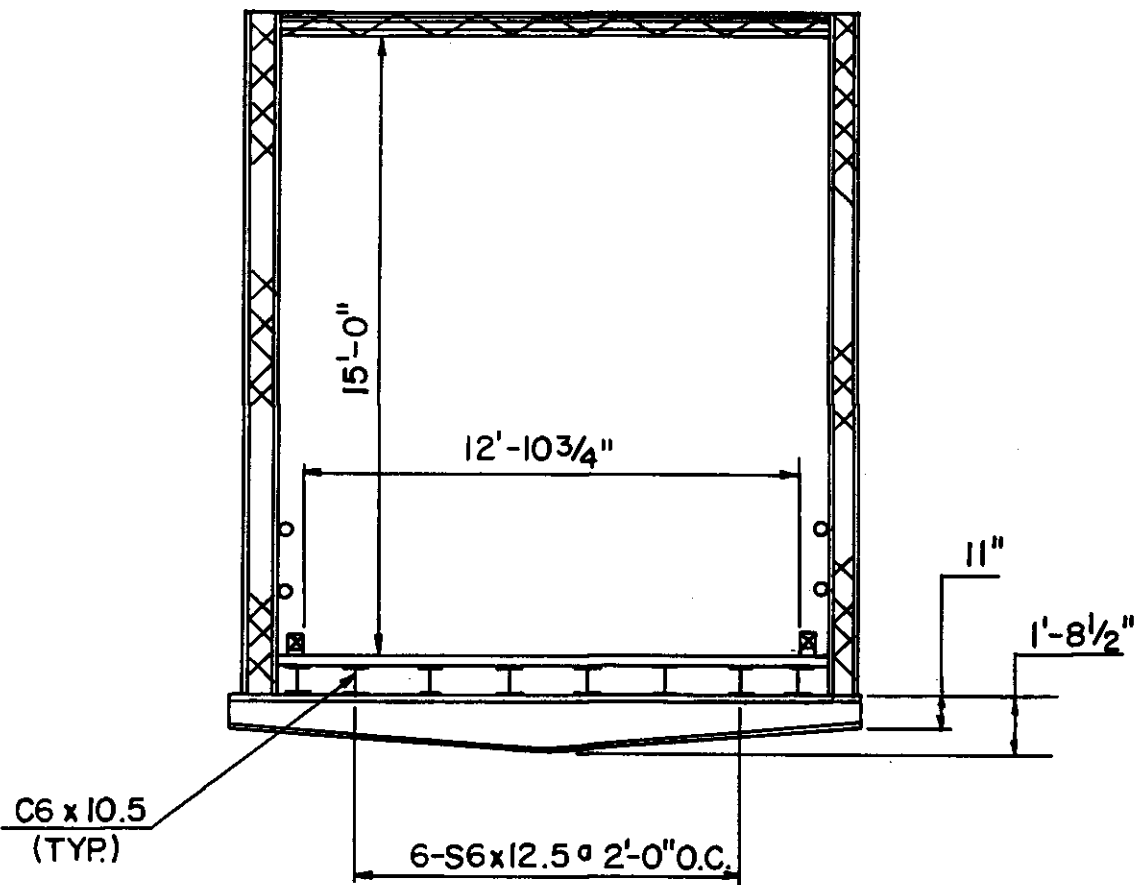
Source: Commonwealth of Pennsylvania,
Department of Transportation, Bridge Safety
Inspection and Analysis Report, 1996.
Prepared by Larson Design Group,
Williamsport, Pennsylvania.



Knight Bridge (Columbia County Bridge No. 44)
Township Route 413 Over Catawissa Creek
Main Township
Columbia County, Pennsylvania

Schematic Elevation

Source: Commonwealth of Pennsylvania,
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Prepared by Larson Design Group,
Williamsport, Pennsylvania.



CROSS - SECTION
Not To Scale

Knight Bridge (Columbia County Bridge No. 44)
Township Route 413 Over Catawissa Creek
Main Township
Columbia County, Pennsylvania

Schematic Cross Section

Source: Commonwealth of Pennsylvania,
Department of Transportation, Bridge Safety
Inspection and Analysis Report, 1996.
Prepared by Larson Design Group,
Williamsport, Pennsylvania.